

## CLAIM

1. What I claim as my invention the chemical industrial system design to manufacture nitrogen dioxide, nitric oxide, nitric acid and metallic ascorbates and alkyl ascorbates of vitamin C.
2. What I claim as my invention: when aqueous ascorbic acid solution or isoascorbic acid solution is brought together with aqueous sodium nitrite solution in a chemical system; the chemical reactions will result in giving nitrogen dioxide, nitric oxide and sodium ascorbate or sodium isoascorbate as products; this gas mixture can be used as raw material or this gas mixture can be further reacted with oxygen giving homogeneous nitrogen dioxide that can be used as final product or this nitrogen dioxide can be dissolved in water (reacts with water) forming nitric acid; the generated gas mixture; nitrogen dioxide, nitric oxide can be separated into their individual components by introducing the gas mixture into water; nitrogen dioxide will react with water forming nitric acid and nitric oxide is collected over water and is ready for further use.
3. What I claim as my invention: when aqueous ascorbic acid solution or isoascorbic acid solution is brought together with aqueous potassium nitrite solution in a chemical system; the chemical reactions will result in giving nitrogen dioxide, nitric oxide and potassium ascorbate or potassium isoascorbate as products; this gas mixture can be used as raw material or this gas mixture can be further reacted with oxygen giving homogeneous nitrogen dioxide that can be used as final product or this nitrogen dioxide can be dissolved in water (reacts with water) forming nitric acid; the generated gas mixture; nitrogen dioxide, nitric oxide can be separated into their individual components by introducing the gas mixture into water; nitrogen dioxide will react with water forming nitric acid and nitric oxide is collected over water and is ready for further use.
4. What I claim as my invention: when aqueous ascorbic acid solution or isoascorbic acid solution

is brought together with aqueous calcium nitrite solution in a chemical system;the chemical reactions will result in giving nitrogen dioxide,nitric oxide and calcium ascorbate or calcium isoascorbate as products;this gas mixture can be used as row material or this gas mixture can be further reacted with oxygen giving homogeneous nitrogen dioxide that can be used as final product or this nitrogen dioxide can be dissolved in water (reacts with water) forming nitric acid;the generated gas mixture;nitrogen dioxide,nitric oxide can be separated into their individual components by introducing the gas mixture into water;nitrogen dioxide will react with water forming nitric acid and nitric oxide is collected over water and is ready for further use.

5. What I claim as my invention: when aqueous ascorbic acid solution or isoascorbic acid solution is brought together with aqueous barium nitrite solution in a chemical system;the chemical reactions will result in giving nitrogen dioxide,nitric oxide and barium ascorbate or barium isoascorbate as products;this gas mixture can be used as row material or this gas mixture can be further reacted with oxygen giving homogeneous nitrogen dioxide that can be used as final product or this nitrogen dioxide can be dissolved in water (reacts with water) forming nitric acid;the generated gas mixture;nitrogen dioxide,nitric oxide can be separated into their individual components by introducing the gas mixture into water;nitrogen dioxide will react with water forming nitric acid and nitric oxide is collected over water and is ready for further use.

6. What I claim as my invention: when aqueous ascorbic acid solution or isoascorbic acid solution is brought together with aqueous silver nitrite solution in a chemical system;the chemical reactions will result in giving nitrogen dioxide,nitric oxide and silver ascorbate or silver isoascorbate as products;this gas mixture can be used as row material or this gas mixture can be further reacted with oxygen giving homogeneous nitrogen dioxide that can be used as final

product or this nitrogen dioxide can be dissolved in water (reacts with water) forming nitric acid;the generated gas mixture;nitrogen dioxide,nitric oxide can be separated into their individual components by introducing the gas mixture into water;nitrogen dioxide will react with water forming nitric acid and nitric oxide is collected over water and is ready for further use.

7. What I claim as my invention: when aqueous ascorbic acid solution or isoascorbic acid solution is brought together with isobutyl nitrite solution in a chemical system;the chemical reactions will result in giving nitrogen dioxide,nitric oxide and isobutyl ascorbate or isobutyl isoascorbate as products;this gas mixture can be used as raw material or this gas mixture can be further reacted with oxygen giving homogeneous nitrogen dioxide that can be used as final product or this nitrogen dioxide can be dissolved in water (reacts with water) forming nitric acid;the generated gas mixture;nitrogen dioxide,nitric oxide can be separated into their individual components by introducing the gas mixture into water;nitrogen dioxide will react with water forming nitric acid and nitric oxide is collected over water and is ready for further use.

8. What I claim as my invention: when aqueous ascorbic acid solution or isoascorbic acid solution is brought together with isoamyl nitrite solution in a chemical system;the chemical reactions will result in giving nitrogen dioxide,nitric oxide and isobutyl ascorbate or isoamyl isosacorbate as products;this gas mixture can be used as raw material or this gas mixture can be further reacted with oxygen giving homogeneous nitrogen dioxide that can be used as final product or this nitrogen dioxide can be dissolved in water (reacts with water) forming nitric acid;the generated gas mixture;nitrogen dioxide,nitric oxide can be separated into their individual components by introducing the gas mixture into water;nitrogen dioxide will react with water forming nitric acid and nitric oxide is collected over water and is ready for further use.

9. What I claim as my invention: when aqueous ascorbic acid solution or isoascorbic acid solution is brought together with isopropyl nitrite solution in a chemical system; the chemical reactions will result in giving nitrogen dioxide, nitric oxide and isopropyl ascorbate or isopropyl isoascorbate as products; this gas mixture can be used as raw material or this gas mixture can be further reacted with oxygen giving homogeneous nitrogen dioxide that can be used as final product or this nitrogen dioxide can be dissolved in water (reacts with water) forming nitric acid; the generated gas mixture; nitrogen dioxide, nitric oxide can be separated into their individual components by introducing the gas mixture into water; nitrogen dioxide will react with water forming nitric acid and nitric oxide is collected over water and is ready for further use.